

Amendment and Response

Applicant: Victor T. Escobedo et al.

Serial No.: 10/608,642

Filed: June 27, 2003

Docket No.: 200207746-1

Title: PRINthead ORIENTATION

REMARKS

The following Remarks are made in response to the Non-Final Office Action mailed April 5, 2005, in which claims 1-48 were rejected. With this Amendment, claim 6 has been cancelled without prejudice, and claims 1, 5, 10, 14-16, 28, 33, 34, 36, 38-40, 44, and 48 have been amended to clarify Applicant's invention. Claims 1-5 and 7-48, therefore, remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1-8, 10-16, 25, 26, 28-42, 44, 45, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Burr et al. U.S. Patent No. 5,781,212. Claims 9 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burr et al. in view of Hermanson U.S. Patent No. 5,581,284. Claims 17-24, 43, 46, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burr et al. in view of Ikemoto et al. 6,793,319.

With this Amendment, independent claim 1 has been amended to clarify that the printhead includes a first column of nozzles and a second column of nozzles each oriented at an angle to an axis of relative movement between the printhead and the print media, wherein the first column of nozzles and the second column of nozzles are oriented substantially parallel to each other and substantially overlap in a direction substantially perpendicular to the print axis, and wherein at least some of the nozzles including at one nozzle of the first column of nozzles and at least one nozzle of the second column of nozzles are variably aligned to the print axis.

With this Amendment, independent claim 10 has been amended to clarify that the printhead includes a plurality of nozzles divided into subgroups of nozzles and including a first column of nozzles and a second column of nozzles each oriented at an angle to an axis of relative movement between the printhead and the print media, wherein the first column of nozzles and the second column of nozzles are oriented substantially parallel to each other and substantially overlap in a direction substantially perpendicular to the print axes.

With this Amendment, independent claim 28 has been amended to clarify that the first plurality of nozzles and the second plurality of nozzles substantially overlap in a direction substantially perpendicular to the print axes.

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With this Amendment, independent claim 33 has been amended to clarify that the printhead includes a first column of nozzles and a second column of nozzles and means for variably aligning at least some of the nozzles including at one nozzle of the first column of nozzles and at least one nozzle of the second column of nozzles to the print axis, wherein the first column of nozzles and the second column of nozzles are oriented substantially parallel to each other and substantially overlap in a direction substantially perpendicular to the print axis.

With this Amendment, independent claim 39 has been amended to clarify that the printhead includes a plurality of nozzles divided into subgroups of nozzles and including a first column of nozzles and a second column of nozzles, wherein the first column of nozzles and the second column of nozzles are oriented substantially parallel to each other and substantially overlap in a direction substantially perpendicular to the print axes.

With respect to the Burr et al., Hermanson, and Ikemoto et al. patents, none of these patents, individually or in combination, teach or suggest a printhead as claimed in independent claim 1, a printhead as claimed in independent claim 10, a printhead arrangement as claimed in independent claim 28, a printhead as claimed in independent claim 33, nor a printhead as claimed in independent claim 39. For example, the Burr et al. patent discloses an ink jet print head 10 including an orifice plate 86 which defines nozzles 88 in each of four arrays 90K, 90M, 90Y, and 90C (Fig. 13; col. 9, lines 4-6), wherein elements 28 of Figure 4 of the Burr et al. patent are pressure chambers formed in pressure plate 22 (col. 5, lines 40-45). Nozzles 88 of the Burr et al. patent, however, are not arranged in columns of nozzles which are oriented substantially parallel to each other and substantially overlap in a direction substantially perpendicular to a print axis.

In view of the above, Applicant submits that independent claims 1, 10, 28, 33, and 39 are each patentably distinct from the Burr et al., Hermanson, and Ikemoto et al. patents and, therefore, are each in a condition for allowance. Furthermore, as dependent claims 2-5 and 7-9 further define patentably distinct claim 1, dependent claims 11-27 further define patentably distinct claim 10, dependent claims 29-32 further define patentably distinct claim 28, dependent claims 34-38 further define patentably distinct claim 33, and dependent claims 40-48 further define patentably distinct claim 39, Applicant submits that these dependent claims are also in a condition for allowance. Applicant, therefore, respectfully requests that the

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rejection of claims 1-8, 10-16, 25, 26, 28-42, 44, 45, and 48 under 35 U.S.C. 102(b), the rejection of claims 9 and 27 under 35 U.S.C. 103(a), and the rejection of claims 17-24, 43, 46, and 47 under 35 U.S.C. 103(a) be reconsidered and withdrawn and that claims 1-5 and 7-48 be allowed.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-5 and 7-48 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to either Robert D. Wasson at Telephone No. (360) 212-2338, Facsimile No. (360) 212-3060 or Scott A. Lund at Telephone No. (612) 573-2006, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

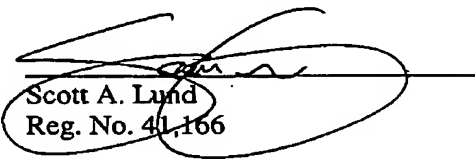
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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703) 872-9306 on this 24th day of June, 2005.

By: 
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